In the Specification:

- Please add the following paragraphs starting on page 12, line:

The principles of the coding algorithm for the wideband are almost identical to coding principles of the Narrowband Selectable Mode Vocoder (NB-SMV) and, thus, the wideband is referred to as WB-SMV.

The WB-SMV codes the wideband signal using short-term prediction, long-term prediction, and excitation coding, similar to traditional CELP type codecs, but with significant enhancements in speech classification, speech modifications, parameter quantization, and coding control.

At the front-end of the speech coding algorithm, the speech passes through a noise-suppression algorithm, similar to the one provided by Motorola as an example of a wideband noise-suppressor. The speech is then down-sampled to the sampling frequency of 14 KHz. An 18th order LPC analysis, centered at the middle of the third quarter of the frame, is performed, and the prediction coefficients are transformed to the LSF representation, and an open-loop pitch analysis is performed. Based on several parameters, the frame is classified into one of six (6) phonetic classes, and the rate determination algorithm determines the coding rate for the frame, similar to the NB-SMV.

The LSFs are quantized using a predictive multi-stage vector quantization scheme. In one embodiment, while a different prediction scheme and a different number of bits are used for each rate (and type), the codebooks are shared between all of the quantizers.

In one embodiment, an additional signal decomposition parameter is calculated and used in both encoding and decoding of the speech signal for Full Rate and Half Rate frames. Frames

that are coded using the Full Rate or the Half Rate are further classified into either Type-1 or Type-0 frames, where Type-1 frames are highly periodic and stationary voiced frames. The processing and the coding of Type-1 frames are different from the processing and the coding of Type-0 frames. Type-1 and Type-0 frames are divided into four (4) subframes, and the adaptive-codebook and fixed-codebook information for each subframe is derived, quantized and transmitted, with two exceptions. First, for Type-1 frames, similar to EVRC and NB-SMV Type-1 frames, only a single pitch value is transmitted, and the subframe pitch values are interpolated. Second, for Half-Rate Type-1 frames, the first subframe is not coded, and its excitation is interpolated from its neighboring subframes.

Since only a single pitch value is transmitted for Type-1 frames, signal warping is performed to create a modified target signal, similar to the RCELP approach. The pitch gains are vector quantized before the subframe processing. The coding of the excitation uses the eX-CELP concept of several different fixed codebooks, which are selected based on closed-loop measures and perceptual considerations. The fixed codebook gains are vector quantized after the subframe processing is completed.

Type-0 frames are coded using standard CELP approach, but with eX-CELP fixed codebook structure, and where unquantized gains are applied during the fixed-codebook search. The adaptive codebook gains and the fixed codebook gains are vector quantized only after the excitation for all subframes is selected.

Quarter Rate frames are divided into two subframes, while Eighth Rate frames are processed as a whole. For either Quarter Rate or Eight Rate frames, the signal is represented and coded by gain-controlled random excitation.

In the decoder, based on the rate, the type, and the signal decomposition factor, the fixed and the adaptive excitations are constructed and added. The excitation is passed through the reconstructed 18th order LPC filter and a postfiler, and then it is upsampled to 16 KHz.

The following are the bit allocation tables for Full Rate Type-1 Frames, Full Rate Type-0 Frames, Half Rate Type-1 Frames, Half Rate Type-0 Frames, Quarter Rate and Eighth Rate Frames.

Parameter	*Bit Allocation*
Frame Type	1
Signal Decomposition	3
LSFs	46
Pitch	8+6
Gp	10
Gc	16
Fixed Codebook	176
Total	266

Bit Allocation for Full Rate Type-1 Frames

Parameter	*Bit Allocation*
Frame Type	1
Signal Decomposition	3
LSFs	48
pitch	30
Gp	12
Gc	20
Fixed Codebook	152
Total	266

Bit Allocation for Full Rate Type-0 Frames

Parameter	*Bit Allocation*
Frame Type	1
Signal Decomposition	3
LSFs	39
pitch	8+6
Gp	7

Gc	9
Fixed Codebook	51
Total	124

Bit Allocation for Half Rate Type-1 Frames

Parameter	*Bit Allocation*
Frame Type	1
Signal Decomposition	3
LSFs	38
pitch	24
Gp	8
Gc	14
Fixed Codebook	36
Total	124

Bit Allocation for Half Rate Type-0 Frames

Parameter	*Bit Allocation - Quarter Rate*	*Bit Allocation - Eighth Rate*
LSFs	44	15
Gain(s)	10	5
Total	54	20

Bit Allocation for Quarter Rate and Eighth Rate Frames